

# Two New Species of the Genus *Sterigmapetalum* (Rhizophoraceae) from the Venezuelan and Brazilian Amazonian Region

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**ABSTRACT.** Two new species of *Sterigmapetalum* subg. *Sterigmapetalum* are described from Venezuela and Brazil: *S. chrysophyllum* and *S. plumbeum*. Relationships with related species are discussed, and an illustration for each species is provided.

**RESUMEN.** Se describen dos nuevas especies de *Sterigmapetalum* subgénero *Sterigmapetalum* de Venezuela y Brasil: *S. chrysophyllum* y *S. plumbeum*. Se discuten sus relaciones con las especies afines y se presentan ilustraciones de cada una de ellas.

*Sterigmapetalum* Kuhlmann is a small neotropical genus with nine species in the Rhizophoraceae. *Sterigmapetalum* and *Cassipourea* Aublet were segregated by Steyermark & Liesner (1983) into a new tribe, the Hypogyneae. Subsequently, Tobe & Raven (1987), based on a detailed study of the morphology of the seed, flower, and fruit, placed these two genera in the Macarisieae, a treatment originally employed by Schimper (1893) a century earlier.

Eight of the nine species of *Sterigmapetalum* occur in northern South America (Colombia, Venezuela, Guyana, and Surinam) and one (*S. obovatum* Kuhlmann) is restricted to the western and central Amazonian region of Peru and Brazil (Prance et al., 1975).

***Sterigmapetalum chrysophyllum* Aymard & Cuello, sp. nov.** TYPE: Venezuela. Amazonas: Dpto. Atabapo, Río Ventuari, bosques en plateau, 04°14'N, 65°58'W, 1250 m, Feb. 1992 (fl), Proyecto inventario de los Recursos Naturales de la Guayana Venezolana-CVG-TEC-MIN, A. Chavel 411 (holotype, PORT; isotypes, MO, VEN). Figure 1.

Species nova quae a *S. exappendiculato* Steyermark & Liesner stipulis triangularibus, acutis, 3–5 mm longis; foliis coriaceis, 3–8 cm longis, supra glabris, pagina inferna tomento flavo omnino occulta; petiolo 2–4 mm longo, juventute dense flavo-tomentoso; petalis extus epapillatis, fimbriis lateralibus munitis differt.

Trees 15–20 m high; branches 3-verticillate, terete, covered completely by a yellow-ocher pubescence when young, glabrous or sparsely adpressed-pubescent when mature. Stipules triangular, acuminate, 3–5 mm long, with yellow pubescent trichomes on both surfaces, internally glandular at the base. Leaves 3-whorled, the blades coriaceous, elliptical or oblong-elliptical, 3–8 × 1.5–5.5 cm, obtuse to truncated at the base, retuse at apex, margin subrevolute, crenate, blades glabrous on upper surface, covered completely by yellow tomentum on under surface, lateral nerves 8–14 pairs, tertiary venation more evident on upper surface than on under surface; petiole 2–4 × 1–2 mm, densely yellow-ocher pubescent when young, glabrous or sparsely adpressed-pubescent when mature. Inflorescences solitary in the leaf axils, 1–2 cm long; 1 to many flowers, peduncle striate, adpressed-pubescent with yellow trichomes; pedicels 1 mm long, adpressed-pubescent with yellow trichomes on both surfaces; flowers subtended by bractlets, lanceolate, 1–2 mm long, adpressed-pubescent with yellow trichomes on both sides; staminate flowers with 5-lobulate calyx, obovate, 3–5 × 2–3 mm (calyx and lobes), adpressed-pubescent with yellow trichomes externally, adpressed-pubescent with sericeous trichomes internally; petals 5, 2–3 mm long, unguiculate, externally adpressed-pubescent with yellow trichomes from the middle to the apex, glabrous internally, with three apical appendices and two lateral ligules, the ligules 1–1.5 mm long, glabrous, 4–5-laciniate; stamens 8–10, united at the base, filaments glabrous, 1–2 mm long, anthers 1 mm long, oblong, glabrous; pistilodium rudimentary, conic, hispid with yellow trichomes; pistillate flowers not seen. Fruit obovate, 8–12 × 4–7 mm, completely covered by an adpressed yellow-ocher indument, seeds 4–5 mm long, oblong, glabrous and reticulate.

**Distribution and common names.** *Sterigmapetalum chrysophyllum* is only known from the middle and upper Ventuari River basin, Atabapo Department, Amazonas State, Venezuela, at 1250 m. It is

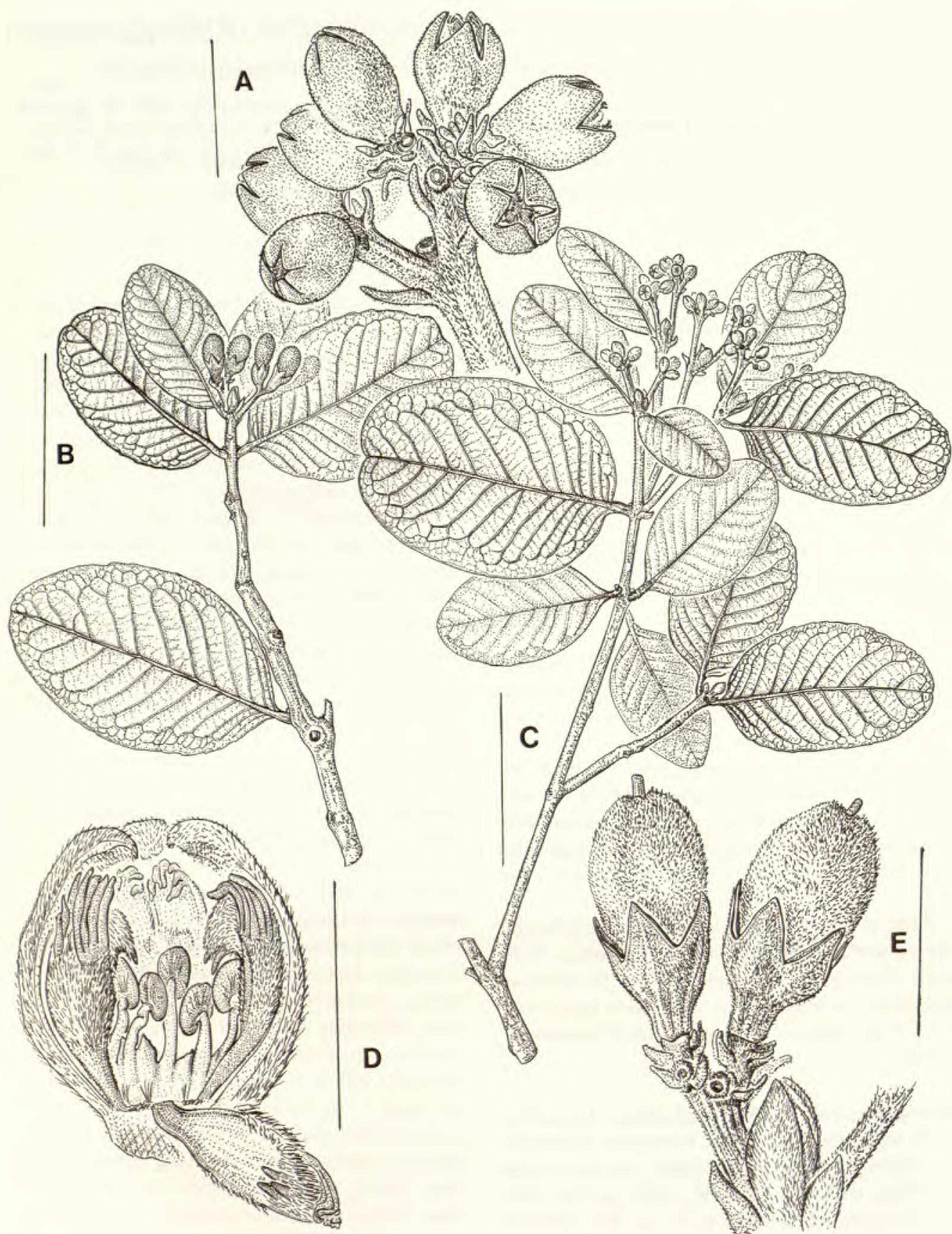


Figure 1. *Sterigmapetalum chrysophyllum* Aymard & Cuello. —A. Inflorescence with open flowers. —B. Fruiting branch. —C. Flowering branch. —D. Flower with 1 sepal removed leaving a horizontal scar. —E. Young fruit. Scale: A, D = 0.5 cm; B, C = 5 cm; E = 1 cm. A, C, and D drawn from holotype (*Chavie 411*); B and E drawn from paratype (*Chavie 406*).

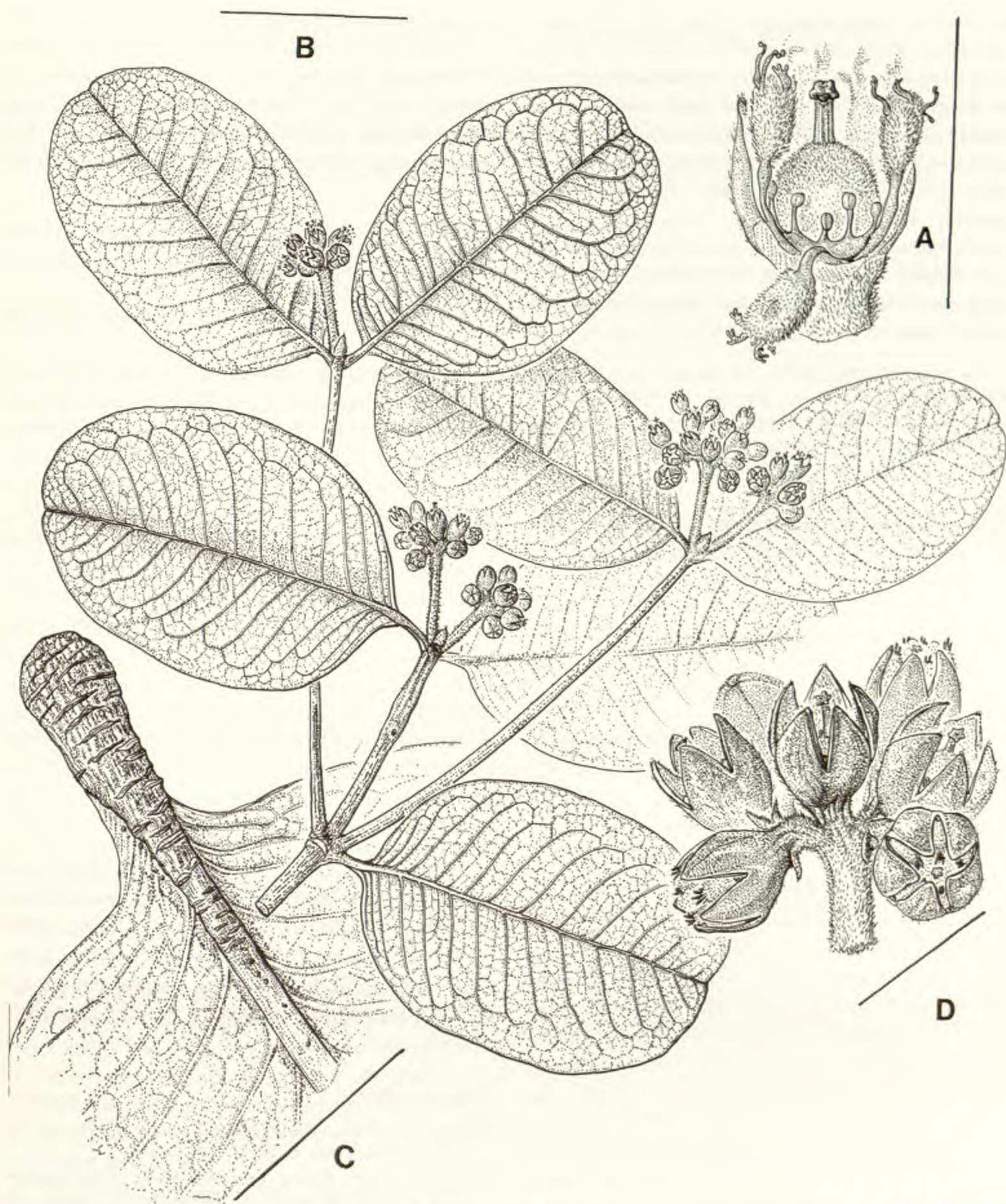


Figure 2. *Sterigmapetalum plumbeum* Aymard & Cuello. —A. Pistillate flower showing the ligules. —B. Flowering branch. —C. Base of the under surface of the leaf lamina. —D. Pistillate inflorescence. Scale: A, C, and D = 1 cm; B = 5 cm. All from Daly et al. 5608.

known by the common names of "kasemani" and "tadiji" (Y'ekuana).

**Ecology.** Mesothermic humid forests of medium height (18–25 m), on sandstone surface outcrops.

The absence of resinous exudate and the presence of 3-whorled leaves and laciniate petal ligules

indicate that *Sterigmapetalum chrysophyllum* belongs to subgenus *Sterigmapetalum* (Steyermark & Liesner, 1983). This new species is related to *S. exappendiculatum* Steyermark & Liesner, but it differs in its triangular-acuminate stipules that are 3–5 mm long (vs. stipules ovate-lanceolate, subobtuse, and 7–10 mm long); coriaceous leaves that

are 3–8 cm long, glabrous or sparsely adpressed-pubescent above and completely covered by yellow indumentum below (vs. leaves subcoriaceous, 7–14 cm long, sparsely pilose on the midrib above, moderately to densely adpressed-sericeous below); petioles 2–4 mm long, completely covered by a yellow-ocher pubescence when young, and glabrous or sparsely adpressed-pubescent when mature; and petals that are not papillate externally, with two lateral ligules 4–5-laciniate (vs. petiole 5–11 mm long, sericeous-tomentose, and petals that are papillate externally and without lateral ligules).

**Paratype.** VENEZUELA. Amazonas: Dpto. Atabapo, Río Ventuari, bosques en plateau, 04°14'N, 65°58'W, 1250 m, Feb. 1992 (fl), Proyecto inventario de los Recursos Naturales de la Guayana Venezolana-CVG-TEC-MIN, A. Chavie 406 (MO, PORT, VEN).

**Sterigmapetalum plumbeum** Aymard & Cuello, sp. nov. TYPE: Brazil. Amazonas: Mun. São Gabriel da Cachoeira, Upper Rio Negro, near Comunidade Aparecida, opposite mouth of Igarapé Tuari, 0°20'N, 67°19'W, 6 Nov. 1987 (fl), D. C. Daly, P. J. Maas & J. Ramos 5608 (holotype, MO; isotypes, INPA, NY). Figure 2.

A *S. colombianum* Monachino stipulis triangularibus, 5–6 mm longis; foliis coriaceis, oblongis, 8–11 cm longis, 5–7.5 cm latis, utrinque glabris, nervis lateralibus 17–24-jugatis; inflorescentiis 1.4–2.2 cm longis; floribus 4–5 mm longis, sepalis intus indumento grisaceo nitido obtectis, petalis oblanceolatis differt.

Trees 8 m high; branches 3-verticillate, lenticellate, sparsely adpressed-pubescent when young, glabrous when mature. Stipules triangular, 5–6 mm long, densely adpressed-pubescent on both surfaces, barbate and glandular internally at the base. Leaves 3-whorled, the blades coriaceous, oblong, 8–11 × 5–7.5 cm, base rounded, apex emarginate, margins subrevolute, glabrous on both surfaces, lateral nerves 17–24 on both sides, tertiary venation very evident on both surfaces, petioles 5–7 × 2–3 mm, sparsely adpressed-pubescent on young leaves, glabrous on mature leaves. Inflorescences solitary in the axils, 1.4–2.2 cm long; peduncles adpressed-pubescent, especially at the base; pedicels 1–2 mm long, adpressed-pubescent, subtended by 3 bracts, lanceolate-triangular, the bracts 3 mm long, sparsely adpressed-pubescent externally, densely adpressed-pubescent internally; pistillate flowers with a 5-lobulate calyx, 4–5 mm long, 3–4 mm wide, glabrous to sparsely pilose externally, densely adpressed-pubescent internally with a silvery gray indumentum; petals 5, white, 5–5.5 mm long, unguiculate, oblanceolate, externally adpres-

sed-pubescent from the middle to the apex, internally glabrous, with five lateral ligules, the ligules 3 mm long, glabrous, 5-laciniate; staminodes 10, united at the base, filaments glabrous, 1 mm long; ovary densely pubescent, style glabrous, 3 mm long, stigma capitate, staminate flowers and fruits not seen.

**Distribution.** Only known in the upper Rio Negro region, Municipio San Gabriel de Cachoeira, Amazonas, Brazil.

**Ecology.** Upper Amazonian caatinga, on sandy soil.

*Sterigmapetalum plumbeum* is related to *S. colombianum* Monachino (restricted to mesothermic humid forests in the department of Magdalena, northwestern Colombia; Barbosa, 1988), but it can be distinguished from this species by the triangular stipules, 5–6 mm long, coriaceous leaves, oblong, 8–11 cm long, 5–7.5 cm wide, glabrous on both sides, lateral nerves 17–24 (vs. ovate stipules, 1.5–2 mm long, subcoriaceous, obovate leaves, 4.5–6.7 cm long, 2–4 cm wide, glabrous to sparsely pilose on the main vein and lateral ones below, lateral nerves 8–12); inflorescences 1.4–2.2 cm long, pistillate flowers 4–5 mm long, with sepals internally covered by a silvery gray indumentum and petals oblanceolate (vs. inflorescences 8–10 mm long, pistillate flowers 2–3 mm long with sepals internally sericeous and the petals subobovate).

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